

THE CLAIMS

What is claimed is:

Sub 27
5 1. A drum comprising:
a side wall having end portions disposed at longitudinal ends thereof;
first and second end walls located adjacent the end portions, the first end wall defining a fill/drain opening therein;
a circumferential carrying and transport rim disposed on at least one of the end portions and configured for carrying the drum with drum handling equipment; and
10 a first protrusion formed on the side wall configured and dimensioned to resist buckling of the side wall, wherein the drum defines a longitudinal axis between the end portions, and the protrusion extends substantially circumferentially about the side wall around the longitudinal axis.

15 2. The drum of claim 1, wherein the first protrusion extends inwardly toward the longitudinal axis.

3. The drum of claim 2, wherein the first protrusion defines an indentation on an exterior surface of the drum opposite to the protrusion.

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4. The drum of claim 1, wherein the side wall comprises a plurality of side wall sections that define a substantially polygonal first cross-section of the side wall.

5. The drum of claim 4, wherein the side wall further comprises corner sections formed
25 at intersections between the side wall sections, and the first protrusion cuts across the corner sections.

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30 6. The drum of claim 1, wherein the drum defines a drum height between the end portions and substantially parallel to the longitudinal axis, and the first protrusion is disposed in a plane located at about 30% to about 70% of the drum height.

7. The drum of claim 1, wherein the side wall further comprises a second protrusion formed thereon, and the second protrusion extends substantially in a direction of the longitudinal axis.

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8. The drum of claim 1, further comprising a reinforcing ring disposed adjacent one of the end portions, the reinforcing ring having at least one arcuate portion and being dimensioned to allow rolling of the drum about the reinforcing ring.

5 9. The drum of claim 1, further comprising at least one reinforcing rib formed in the end walls.

Sub 26 10. A drum comprising:

a side wall comprising:

10 a first portion having a plurality of side wall sections that define a first circumferential cross-section,

a second portion comprising angular indentations in the side wall disposed at intersections between the side wall sections defining a second circumferential cross-section that is different than the first cross-section and configured and dimensioned to resist buckling of the side wall, and

15 end portions disposed at longitudinal ends of the side wall;
first and second end walls located adjacent the end portions, the first end wall comprising a recessed well; and
a fill/drain opening defined in the recessed well.

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11. The drum of claim 10, wherein the second portion divides the first portion into upper and lower sections.

12. The drum of claim 10, wherein the drum defines a drum height between the end walls and substantially perpendicular to one of the end walls, and the second portion is located at about 30% to about 70% of the drum height.

Sub 26 13. ~~The drum of claim 10, wherein the first cross-section is substantially polygonal.~~

30 14. ~~The drum of claim 10, wherein the first cross-section is substantially square and the second cross-section is substantially annular.~~

Sub 27 15. ~~The drum of claim 10, wherein the angular indentations are substantially V-shaped and are deepest at the intersections and transition into the side wall sections such that the second cross-section is substantially annular.~~

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16. The drum of claim 10, wherein the V-shaped indentations are spaced apart a predetermined distance such that each V-shaped indentation does not transition into each adjacent V-shaped indentation.

17. The drum of claim 10, wherein the drum defines a drum height along the longitudinal axis and between the end portions, wherein the V-shaped indentations are disposed in a plane located at about 30% to about 70% of the drum height.

18. The drum of claim 10, further comprising a protrusion formed one of the walls for stiffening the at least one wall.

19. A drum comprising:
a side wall comprising a first portion having a plurality of side wall sections of substantially equal length that define a substantially polygonal first cross-section of the side walls, the side wall having end portions disposed at longitudinal ends thereof;
first and second end walls located adjacent the end portions, the first end wall defining a fill/drain opening; and
a circumferential carrying and transport rim disposed on at least one of the end portions and configured for carrying with drum handling equipment.

20. The drum of claim 19, wherein the first cross-section is substantially square.

21. The drum of claim 19, further comprising a protrusion formed on a surface of at least one of the walls for stiffening the at least one wall.

22. The drum of claim 19, wherein the protrusion protrudes inwardly into the drum.

23. The drum of claim 19, wherein the at least one wall comprises at least one of the side wall sections, and the protrusion extends substantially circumferentially.

24. The drum of claim 19, wherein:
the drum defines a longitudinal axis between the end walls;
the at least one wall comprises at least one of the side wall sections; and
the protrusion extends substantially in a direction of the longitudinal axis.

25. The drum of claim 19, wherein the side wall has a substantially uniform thickness.

26. The drum of claim 19, wherein the first cross-section comprises four convex wall sections connected by four radiused corner sections, and a first radius is measured from a center of the first cross-section to a midpoint of the wall sections, and a second radius is measured from the center of the first cross-section to a midpoint of the corner sections, wherein the second radius is between about 10% and about 50% longer than the first radius.

27. The drum of claim 19, wherein the drum is of plastic material and has a volumetric capacity of between about 10 gallons and about 80 gallons, and at least one of the wall sections is reinforced such that the drum can support at least one second similar drum that is substantially filled and stacked on top of the drum for resisting buckling of the wall sections.

28. The drum of claim 19, wherein the circumferential carrying and transport rim comprises an outwardly protruding lip substantially having an L-shape and configured such that the drum can be lifted by the transport rim using drum handling equipment.

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